

1 **CLAIMS**

2 I claim:

3 1. One or more computer readable media having stored thereon a plurality of
4 instructions that, when executed by at least one processor, cause the processor to
5 perform acts comprising:

6 in response to a user input to raise gain in one band of a multi-band
7 computer implemented equalizer, computing a lower gain for at least one other
8 band of the equalizer.

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10 2. The media recited in claim 1 wherein said acts further comprise implementing
11 said lower gain for the at least one other band of the equalizer in the equalizer.

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13 3. The media recited in claim 1 wherein said computing a lower gain comprises
14 computing a lower gain for each of the other bands of the equalizer.

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16 4. The media recited in claim 3 wherein said computing a lower gain for each of
17 the other bands of the equalizer comprises computing a lower gain approximately
18 uniformly for each of the other bands of the equalizer.

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20 5. The media recited in claim 1 wherein said computing a lower gain for at least
21 one other band of the equalizer comprises approximately uniformly lowering the
22 gain in the other bands of the equalizer by approximately cumulatively the value
23 of the raised gain in the one band.

1 6. The media recited in claim 1 wherein said computing a lower gain for at least
2 one other band of the equalizer comprises approximately uniformly lowering the
3 gain in the other bands of the equalizer by approximately cumulatively a fraction
4 of the value of the raised gain in the one band.

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6 7. A computer system comprising:

7 a memory;

8 a processor operatively coupled to the memory; and

9 a routine stored in the memory that when executed by any of the processors
10 causes the processor to perform actions including computing a lower gain for at
11 least one first band of a multi-band equalizer in response to a user input to raise
12 gain in a second band of the equalizer.

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14 8. The computer system recited in claim 7 wherein said actions further comprise
15 implementing said lower gain for the at least one first band of the equalizer.

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17 9. The computer system recited in claim 7 wherein said computing a lower gain
18 comprises computing a lower gain for each of the first bands of the equalizer.

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20 10. The computer system recited in claim 9 wherein said computing a lower gain
21 for each of the first bands of the equalizer comprises computing the lower gain
22 approximately uniformly for each of the first bands of the equalizer.

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24 11. The computer system recited in claim 7 wherein said computing a lower gain
25 for at least one first band comprises approximately uniformly lowering the gain in

1 the first bands by approximately cumulatively the value of the raised gain in the
2 second band.

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4 12. The computer system recited in claim 7 wherein said computing a lower gain
5 for at least one first band comprises approximately uniformly lowering the gain in
6 the other bands of the equalizer by approximately cumulatively a fraction of the
7 value of the raised gain in the one band.

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9 13. A method comprising:

10 in response to raising a gain in one band of a multi-band equalizer,
11 calculating an approximately uniform lower gain in the other bands of the
12 equalizer.

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14 14. The method recited in claim 13 further comprising providing the calculated
15 gain of the other bands to the equalizer.

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17 15. The method recited in claim 13 further comprising adjusting the gain of the
18 equalizer in each band according to the raised gain in the one band, and the
19 calculated gain in the other bands.

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21 16. The method recited in claim 13 wherein the calculating an approximately
22 uniform lower gain in the other bands comprises approximately uniformly
23 lowering the gain in the other bands by approximately cumulatively the value of
24 the raised gain in the one band.

1 17. The method recited in claim 13 wherein the calculating an approximately
2 uniform lower gain in the other bands comprises approximately uniformly
3 lowering the gain in the other bands by approximately cumulatively a fraction of
4 the value of the raised gain in the one band.

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6 18. An audio system comprising:

7 first means for determining a lower gain for at least one first band of a
8 multi-band equalizer in response to a user input to raise gain in a second band of
9 the equalizer; and

10 second means for providing a user input to raise gain in a second band of
11 the equalizer to said first means.

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13 19. The audio system recited in claim 18 wherein said determining comprises
14 determining the lower gain such that a lowering of gain in the first bands is
15 approximately uniform for each of the first bands.

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17 20. The audio system recited in claim 18 wherein said determining comprises
18 determining the lower gain in the first bands such that a cumulatively lower gain in
19 the first bands is approximately the value of the raised gain in the second band.

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21 21. The audio system recited in claim 18 wherein said determining comprises
22 determining the lower gain in the first bands such that a cumulatively lower gain in
23 the first bands is approximately a fraction of the value of the raised gain in the
24 second band.

1 22. The audio system recited in claim 18 further comprising:

2 means for providing the calculated gain in the first bands to the equalizer.

3
4 23. The audio system recited in claim 18 further comprising:

5 means for adjusting the gain of the equalizer in each band according to the
6 raised gain in the second band, and the lowered gain in the first bands.

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8 24. A computer system comprising the audio system recited in claim 18.